

I CLAIM:

31. A synthetic surface having a flexible backing member, parallel rows of synthetic ribbons, representing blades of grass, projecting upwardly from the backing member, the rows of ribbons spaced apart from each other from between $5/8$ inch and $2-1/4$ inches, and the length of the ribbons, extending upwardly from the backing member, is at least twice the dimension of the spacing between the rows of ribbons, the surface including a relatively thick layer of particulate material on the backing member supporting the ribbons in a relatively upright position relative to the backing member.

32. A surface as claimed in claim 31, wherein the length of the ribbons, extending upwardly from the backing member, is from between $1\frac{1}{4}$ and 5 inches.

33. A surface as claimed in claim 31, wherein the particulate layer has a thickness of at least two-thirds the length of the ribbons.

34. A surface as claimed in claim 31, wherein the ribbons extend between $\frac{1}{4}$ inch and 1 inch above the layer of particulate material.

35. A surface as claimed in claim 31, wherein the ribbon has a width of about one-half of an inch.

36. A surface as claimed in claim 31, wherein the backing member is a single layer of permeable fabric.

37. A surface as claimed in claim 31, wherein the backing member is a double layer of permeable fabric.

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39. A surface as claimed in claim 31, wherein the particulate layer is a mixture of sand and cryogenically ground rubber.

40. A surface as claimed in claim 39, wherein at least a portion of the particulate material ranges between fifteen to thirty mesh.

41. A surface as claimed in claim 31, wherein the backing member comprises one or more layers of fabric, at least one of the layers of fabric, at least one of the layers of fabric being needle punched to produce fuzzy fibers on its surface.

42. A surface as claimed in claim 36, wherein the single layer of permeable fabric is needle punched to produce fuzzy fibers on its surface.

43. A synthetic grass surface for a sports playing field wherein the synthetic grass surface comprises a flexible backing member, parallel rows of synthetic ribbons, representing blades of grass, projecting upwardly from the backing member, the rows of ribbons spaced apart from each other, the surface including a relatively thick layer of particulate material on the backing member supporting the ribbons in a relatively upright position relative to the backing member, whereby the relationship of the length of the ribbons and the spacing between the rows is

$$2A \leq L$$

such that the length of the ribbons is at least twice the spacing; and the particulate material having a thickness T of at least $\frac{2}{3}$ the length of the ribbons, when A is the spacing between the rows, L is the length of the ribbon measured from the flexible backing and T is the thickness of the layer of particulate material.

44. The surface as claimed in claim 43, wherein the ribbons extend between ¼ inch and 1-1/2 inches above the layer of particulate material.

45. The surface as claimed in claim 43, wherein each of the ribbons has a width of about $\frac{1}{2}$ inch.

46. The surface as claimed in claim 43, wherein the backing member is a single layer of permeable fabric.

47. The surface as claimed in claim 43, wherein the backing member is a double layer of permeable fabric.

48. The surface as claimed in claim 43, wherein the backing member is a triple layer of permeable fabric.

49. A surface as claimed in claim 43, wherein the backing member comprises one or more layers of fabric, at least one of the layers of fabric being needle punched to produce fuzzy fibers on its surface in order to increase the permeability of the backing member.

50. The surface as claimed in claim 48, wherein at least one of the layers of permeable fabric is needle punched to produce fuzzy fibers on its surfaces.

51. The surface as defined in claim 43, wherein the dimension A is between 5/8 inch and 2 1/4 inches, the dimension L is between 1 1/2 and 5 inches.

52. The surface as defined in claim 43, wherein the relationship of the length of the ribbons, the spacing between the rows and the thickness of the particulate material is:

$$2A = 3/2T \leq L.$$

53. The surface for a sports field as defined in claim 43, wherein L is in a range of between 3A and 6A.

54. The surface for a sports field as defined in claim 52, wherein A is in the range of 5/8 inch and 2¼ inches; and L is in the range of 1½ inches to 5 inches.

55. A synthetic surface as defined in claim 44, wherein the ribbons extend between $\frac{1}{4}$ inch and 1 inch above the layer of particulate material.

56. A synthetic surface as defined in claim 43, wherein the particulate layer is a mixture of sand and cryogenically ground rubber.

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